

Amendments to Specification:

This revision starts from the *Brief Description of Sequences* ("FIG. 1 is a...") and ends with paragraph 31 of the *Detailed Description* ("...forming an interlocking web")

On this page is the clean, unmarked version of the revisions. Enclosed as well is the marked version. Deletions are marked on the side and additions are underlined and in grey.

Brief Description of Sequences

- [0005] FIG. 1 is a schematic of the fields available on the setup screen
- [0006] FIG. 2 is a schematic of the editable staff/skill fields
- [0007] FIG. 3 is a schematic of the tool/tool group fields
- [0008] FIG. 4 is a schematic of the task fields
- [0009] FIG. 5 is a schematic of the sites and how they relate to tasks
- [0010] FIG. 6 is a diagram showing the relationship between the classes
- [0011] FIG. 7 is a basic overview of the plan generation process

Detailed Description

- [0018] FIELD OF INVENTION
- [0019] The present invention relates to task and project management. More specifically, it relates to staff assignment and task management where tasks occur at one or more different locations (sites).
- [0020] To assist in explaining how the system works and give a general feel for what it does, a basic overview of the system is given:
- [0021] 1) General Screen - This is where the user inputs basic information such as the name of the project, starting and ending dates, and holidays, workdays, and hours/day. This is used for both plan generation and cost estimates. (Figure 1)
- [0022] 2) Base Data - Staff Skills - The user here defines skills that are available. These skills can be assigned to staff. Also, these skills are added to tasks to specify which staff can perform the task. (Figure 2)
- [0023] 3) Base Data - Indiv. Staff - This is a list of individual staff. Users can enter information including hourly and overtime rates, staff off days, and skills. (Figure 2)
- [0024] 4) Base Data - Tool Types- These are a list of general categories (e.g. "Bulldozer"). These are then assigned skills which can manage the equipment. For example, if a user created a skill called Bulldozer Operating and assigned it to the Bulldozer tool group, then only those workers with the Bulldozer Operating skill could use Bulldozers. (Figure3)
- [0025] 5) Base Data - Individual Tools - These are a list of specific tools that correspond to the tool categories defined under Tool Data. (Figure 3)
- [0026] 6) Tasks - Tasks - Here users can enter task information, including the duration of the task (manpower days and toolpower days). The user can also enter the minimum number of staff that should be present on each day. Finally, users can enter the types of skills which can perform the task and the tool types which are needed for the task. (Figure 4)

[0027] 7) Tasks - Sites - The user enters the sites at which the tasks take place, as well as general site information including closure dates and tenders (site operators) who must be present for any work done at the site. Finally, the user can display a dialog box where each individual task for that particular site is displayed and can be customized. (Figure 5)

[0028] 8) Assignment - Here, the user controls the criteria for the plan to be assigned. After adjusting the desired sliders, the user can push GO and instantly generate a cost estimate.

[0029] 9) Reports - After perfecting the desired plan, the user can print out reports of the plan, both visually using Microsoft ® Project, in a tabular fashion with Microsoft ® Excel, or just view them with a text viewer.

[0030] 10) Modify - After a plan has been generated, there will invariably be variations, like if a worker becomes sick. The Modify screen allows users to change the program dates, etc. around after work has started

[0031] As mentioned above, the system handles four main dimensions: *staff*, *equipment*, *tasks*, and *sites* . Each contains pointer references to the others. For example, in addition to containing basic information, the *staff* data type contains information on which tasks at which sites on which days the staff is working. This is accomplished by a series of classes and pointers to the other various classes, forming an interlocking web. (Figure 11)

Marked Version

Brief Description of Sequences

- [0005] FIG. 1 is a schematic of the fields available on the setup screen
- [0006] FIG. 2 is a schematic of the editable staff/skill fields
- [0007] FIG. 3 is a schematic of the tool/tool group fields
- [0008] FIG. 4 is a schematic of the task fields
- [0009] FIG. 5 is a schematic of the sites and how they relate to tasks
- [0010] FIG. 6 is a diagram showing the relationship between the classes
- [0011] FIG. 7 is a basic overview of the plan generation process

- Deleted:** screen shot
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- Deleted:** the skill editing screen
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- Deleted:** individual staff screen
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- Deleted:** tool type screen
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- Deleted:** individual tool screen
- Deleted:** screen shot of the task screen
- Formatted Table**
- Deleted:** screen shot of the site screen
- Deleted:** [0012] ... [1]

Detailed Description

- [0018] FIELD OF INVENTION
- [0019] The present invention relates to task and project management. More specifically, it relates to staff assignment and task management where tasks occur at one or more different locations (sites).
- [0020] To assist in explaining how the system works and give a general feel for what it does, a basic overview of the system is given:
 - 1) General Screen - This is where the user inputs basic information such as the name of the project, starting and ending dates, and holidays, workdays, and hours/day. This is used for both plan generation and cost estimates. (Figure 1)
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 - 3) Base Data - Indiv. Staff - This is a list of individual staff. Users can enter information including hourly and overtime rates, staff off days, and skills. (Figure 2)
 - 4) Base Data - Tool Types- These are a list of general categories (e.g. "Bulldozer"). These are then assigned skills which can manage the equipment. For example, if a user created a skill called Bulldozer Operating and assigned it to the Bulldozer tool group, then only those workers with the Bulldozer Operating skill could use Bulldozers. (Figure 3)
 - 5) Base Data - Individual Tools - These are a list of specific tools that correspond to the tool categories defined under Tool Data. (Figure 3)
 - 6) Tasks - Tasks - Here users can enter task information, including the duration of the task (manpower days and toolpower days). The user can also enter the minimum number of staff that should be present on each day. Finally, users can enter the types of skills which can perform the task and the tool types which are needed for the task. (Figure 4)
 - 7) Tasks - Sites - The user enters the sites at which the tasks take place, as well as general site information including closure dates and tenders (site operators) who must be present for any work done at the site. Finally, the user can display a dialog box where each individual task for that particular site is displayed and can be customized. (Figure 5)
 - 8) Assignment - Here, the user controls the criteria for the plan to be assigned. After adjusting the desired sliders, the user can push GO and instantly generate a cost estimate.
 - 9) Reports - After perfecting the desired plan, the user can print out reports of the plan, both visually using Microsoft ® Project, in a tabular fashion with Microsoft ® Excel, or just view them with a text viewer.
 - 10) Modify - After a plan has been generated, there will invariably be variations, like if a worker becomes sick. The Modify screen allows users to change the program dates, etc. around after work has started.

- Deleted:** 3
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- Deleted:** 7
- Deleted:** (Figure 8)
- Deleted:** (Figure 10 - A sample GANTT chart from Microsoft Project of a generated assignment plan)
- Deleted:** (Figure 9)

- [0012] FIG. 8 is a screen shot of the assignment panel
- [0013] FIG. 9 is a screen shot of the modify panel
- [0014] FIG. 10 is a view of a sample report exported to MS Project
- [0015] FIG. 11 is a diagram detailing the relationships between the four dimensions
- [0016] FIG. 12 is pseudo-code showing how the system selects the best staff
- [0017] FIG. 13 shows how the class structure creates relationships and linkage

[0031]

As mentioned above, the system handles four main dimensions: *staff*, *equipment*, *tasks*, and *sites*. Each contains pointer references to the others. For example, in addition to containing basic information, the *staff* data type contains information on which tasks at which sites on which days the staff is working. This is accomplished by a series of classes and pointers to the other various classes, forming an interlocking web. (Figure 11)